WHAT IS CLAIMED IS:

1. Method for calibrating electromagnetic-radiation spectroscopic-instrumentation so as to enable quantitative analyses of curable resin, as applied to a substantially-planar veneer-wood sheet surface area during in-line movement of the sheet toward assembly of multiple-ply bundles for producing engineered-composite wood-veneer product, comprising

(A) providing spectroscopic-instrumentation enabling selecting wood-surface penetrative wavelengths of electromagnetic-radiation in a range of about 350 nm to about 2500 nm;

(B) quantitatively pre-establishing pre-determined surface-application of said resin, at a selected level of weight per specified surface area, for individual reference-source wood-veneer test-samples;

(C) supporting said test-samples with pre-established resin-application for movement on a conveyance;

(D) positioning spectroscopic instrumentation providing electromagnetic-radiation in a range of wavelengths including wavelengths absorbed by said resin and capable of penetrating wood-veneer of said test-samples;

(E) controlling rate of movement of said conveyed test-samples with respect to said instrumentation, and coordinating said rate of movement with a selected in-line controlled-rate of movement for lay-up of veneer-wood plies for commercial production of said engineered-composite veneer-wood product;

(F) illuminating a predetermined surface area of said pre-established resin application of said test-samples with visible light (VIS) and simultaneously irradiating with near infra-red (NIR), during said conveyed movement of said test samples relative to said instrumentation,

(G) quantitatively measuring radiation absorbance by pre-established resin applications to individual respective test-samples, for calibrating said spectroscopic-instrumentation, during said controlled rate of movement with respect to said instrumentation.

2. The invention of Claim 1, further including

(H) utilizing spectral-data responsive to absorbance of selected radiation wavelengths, by said pre-established resin-applications on said test-samples, for calibrating said spectroscopic instrumentation for monitoring resin-application, during commercial production of veneer-wood product, by verifying that a linear relationship exists between:

(i) spectroscopically determined absorbance of said selected wavelengths by applied resin, and

(ii) said quantitatively pre-established resin-application on respective individual test-samples.

3. The invention of Claim 2, including

(I) establishing resin-application on said test-samples so as to present an incrementally-progressive quantitative resin-application for veneer-wood of respective test-samples, with said quantitative resin-application being capable of being related to a resin-weight per specified surface area, during commercial

production of a veneer-wood product;

(J) receiving spectral-data, in the form of non-absorbed radiant energy, of said selected wavelengths, as reflected back by said conveyed wood-veneer test samples, for spectroscopically determining absorbance of said selected wavelengths by said applied resin, and

(K) mathematically calculating radiation absorbance of resin applied to respective test samples, for establishing

(i) a linear-relationship between absorbance of said selected wavelengths, and

(ii) quantitative resin-application on said individual test-samples for calibrating said spectroscopic instrumentation for use during said commercial production.

4. The invention of claim 3, further including

calibrating said spectroscopic-instrumentation to be additionally responsive to absorptive effects of moisture content of said veneer-wood and said applied resin, by selecting radiation wavelengths with peak absorbance by said moisture.

5. The invention of Claim 4, including

establishing said instrumentation calibration by selecting one or more wavelength ranges from the group consisting of:

(i) 350nm to 1050 nm

(ii) 1000 nm to 1800 nm

(iii) 1000 nm to 2500 nm; and

(iv) 350 nm to 2500 nm

for obtaining spectral data based on absorbance of said selected wavelengths by said applied resin and said moisture.

6. Method, utilizing calibrated electromagnetic-radiation spectroscopic-instrumentation, for quantitatively monitoring curable-adhesive resin as applied on-line to a selected surface area of a veneer-wood sheet, prior to assembly into a bundle comprising multiple plies, comprising

(A) conveying elongated veneer-wood sheets in-line, for longitudinal travel in the direction of sheet length, presenting a pair of substantially-planar opposed surface areas intermediate sheet lateral edges, for lay-up assembly of bundles of multiple-plies, subsequent to application of said resin;

(B) supplying said resin for at least a single resin applicator as oriented for width-wise application of resin across a substantially-planar surface area of a wood-veneer sheet, which is

(i) substantially co-extensive width-wise with said applicator width; and, in which

(ii) said surface area of resin application is extended longitudinally by travel in-line of said sheets toward said lay-up assembly;

(C) selecting placement of calibrated spectroscopic instrumentation for selective monitoring of resin-application width-wise across a selected portion of said surface area intermediate said lateral edges of said elongated sheets;

(D) selecting electromagnetic radiation wavelengths having a peak absorbance by said applied resin;

(E) irradiating said selected wavelengths across said portion of resin-applied surface area of said sheet during said travel of said sheets;

(F) sensing radiation absorbance of said selected wavelengths by quantitatively measuring reflected-back radiation by wood matrix of said conveyed wood-veneer sheet, and

(G) quantitatively-indicating average resin-application weight as applied across said portion of said sheet surface area, while said sheets are moving in-line toward multiple-ply bundle assembly.

7. The method of claims 6, including selecting from the group consisting of

(i) a single position, and

(ii) plural positions for placement of spectroscopic instrumentation so as to cover a selected widthwise portion of the surface area, between lateral edges of said sheets, which is longitudinally extended by in-line travel of said sheets.

8. The invention of claim, 7 further including enabling measurement of electromagnetic radiation absorbance by applied resin and absorbed moisture of said resin and said wood-veener, by selecting electromagnetic-radiation wavelengths from the group consisting of:

(i) 350 to 1050

(ii) 1000 nm to 1800 nm

(iii) 1000 nm to 2500 nm, and

(iv) 350 nm to 2500 nm.

9. The method of claim 7, including

selecting a plurality of positions intermediate lateral edges of said sheets, with each positioning individual calibrated spectroscopic-measuring instrumentation, so as to enable:

monitoring average resin-application during travel of sheets along said direction of travel, at each of said plurality of selected positions intermediate lateral edges of said sheets;

selecting each of said plural positions for placement of electromagnetic-radiation spectroscopic instrumentation, for monitoring average resin-application by each, which is extended longitudinally by said travel of said sheets, for

indicating resin-application along said direction of travel at each selected instrumentation position, enabling a line operator to selectively direct a remedy, to one or more selected positions for said instrumentation, for correcting a detected discrepancy in resin application along said direction of travel.